**DEDECKER'S CLOVER**
*Trifolium dedeckerae* J. M. Gillett

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**Management Status:** Federal: BLM Sensitive
California: S2.3 (CDFG, 1998)
CNPS: List: 1B, R-E-D Code 3-1-3 (Skinner and Pavlik, 1994)

**General Distribution:**

Dedecker's clover is a California endemic known from scattered localities on the rugged, arid, eastern crest of the Sierra Nevada Mountains from Tulare and Inyo Counties, south to the Spanish Needle area in Kern County. Populations of Dedecker's clover are also found in the White Mountains of Mono and Inyo Counties.

**Distribution in the West Mojave Planning Area:**

The one West Mojave Planning Area population of Dedecker's clover occurs in the Owens Peak Wilderness Area on the eastern side of Spanish Needle at approximately 2300 m elevation (Shevock, 1997b).

**Natural History:**

Dedecker's clover was described as a new species by Dr. John M. Gillett (1972). Since this initial paper, little scientific attention has been paid to Dedecker's clover. There appear to have been no studies of any aspect of its ecology or natural history. The interest that has been shown in the species has been strictly taxonomic. There is much confusion concerning the evolutionary relationships and distinctness of the plant, and consequently about the correct Latin name assigned to it (Vincent, 1997). Isely (1993) and Barneby (1989) both treated Dedecker's clover has been treated as a variety of *Trifolium macilentum*. Others have thought that its relationships are with *Trifolium kingii* and have treated it as a subspecies of that plant, *T. kingii* ssp. *dedeckerae* (Zohary and Heller, 1984). In this account both these names are treated as synonyms of *Trifolium dedeckerae* and it is treated as a distinct species, though I agree with the placement of it nearer to *T. kingii*.

Dedecker's clover is a small, glabrous, rhizomatous perennial herb in the pea family (Fabaceae). The leaves, with three very narrow leaflets, are mainly basal with 2-3 leaves being found on the stem (Gillett, 1972). Pink to pale violet flowers are produced from June to early July on short stalked pedicels which quickly elongate and reflex the flower downward (Isely, 1993). Several characters separate Dedecker's clover from other *Trifolium* species of the southern and central Sierra Nevada Mountains with which it could be confused. Dedecker's clover differs from carpet clover (*T. monanthum* var. *monanthum)* and cast clover (*T. wormskioldi)* in lacking a wheel-like cluster of fused bracts at the base of the inflorescence (Isely, 1993). The glabrous, entire lobes of the calyx separate Dedecker's clover from long-stalked clover (*T. longipes* var. *nevadense)* and Beatley's clover (*T. andersonii* var. *beatleyae)*, both of which have ciliate or puberulent calyx lobes (Isely, 1993). Dedecker's clover seems to be most closely allied with Shasta clover (*T.* kingii var. *productum*), which occurs as far south as Sonora

Pass in Tulare County, but differs by narrower leaflets, larger calyx (with slender lobes) and a broad standard (upper petal of the flower).
Pollination requirements are not known for this species, but like most similar legumes it is presumably bee pollinated.

**Habitat Requirements:**

Dedecker's clover occurs in dry, rocky crevices and on gravely slopes and canyon floors derived from granitic and metamorphic substrates (Shevock, 1997b). Dedecker's clover is found in a wide variety of vegetation types throughout its range, but lacks a single indicator habitat in which it is most often found (Shevock, 1997b). Associated species include single-leaf pinyon (*Pinus monophylla*), sierra juniper (*Juniperus occidentalis* ssp. *australis*) and Jeffrey pine (*Pinus jeffreyii*) and occur between 2100 m and 2600 m elevation. Other species with which Dedecker's clover can be associated include Sagebrush (*Artemisia* spp.), Rabbitbrush (*Chrysothamnus* spp.), linanthus *(Linanthus* ssp.), Snowberry (*Symphoricarpos* ssp.), Gooseberry (*Ribes* ssp.) and Morman Tea (*Ephedra* ssp.).

**Population Status:**

A peculiar trend has been noted for Dedecker's clover populations occurring on the highest peaks within its range. These populations tend to be very depauperate in the number of individuals present (Shevock, 1997b). This may be the result of the sparse seed-set (1-2 seeds per fruit) by Dedecker's clover (Isely, 1993) or rather the small size of the seeds (Shevock, 1997b). It may also simply reflect more difficult environmental conditions at the highest elevations.

**Threat Analysis:**

The wide range of Dedecker's clover, its occurrences on federal lands (National Forest land and wilderness areas), and the relative inaccessibility of most populations contribute to a low threat to the species (Shevock, 1997b). Various activities such as trail maintenance, fire prevention strategies and issuance of permits for mining and timber operations could potentially impact certain low elevation sites. Grazing and OHV traffic do not represent a great threat as population localities make these land uses impractical. The rugged terrain in which Dedecker's clover grows should also help protect it from logging and grazing pressures on steep sites with lean soils within non-wilderness lands. The remoteness of Dedecker's clover populations and the ruggedness of the habitat should also greatly reduce the possibility of habitat destruction by off-trail human activity.

**Biological Standards:**

All known populations of Dedecker's clover occur on federal lands, with most on National Forest parcels. This fact should make conservation management decisions easier since the species' habitat is entirely under federal management. Public lands management should concentrate on known Dedecker's clover populations and survey potential habitat before management decisions are made, especially in relation to the small high peak populations. The existence of high peak populations may be an important link to the taxon's historical range and may provide insights into potential future surveying localities. These small isolated populations may also have distinct genetic identities that make them potentially important for future conservation efforts. Within the wilderness areas, management decisions such as trail

maintenance, future trail expansion, and fire prevention strategies, especially along the Pacific Crest Trail in the Owens Peak Wilderness, the only access Spanish Needle Peak (Shevock, 1997a), should focus on known Dedecker's clover populations to reduce the risk of habitat alteration or destruction.

**Literature Cited:**


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